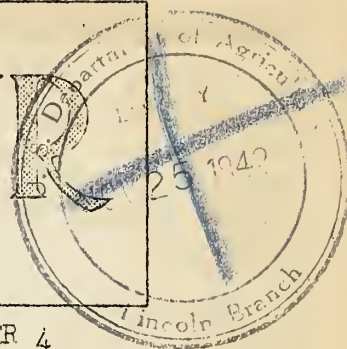


Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

DAKOTA

ZEPHYR



NOVEMBER, 1942

VOL. 7, NUMBER 4

Published by: The Soil Conservation Service
and S. D. Extension Service

Huron, South Dakota
Brookings, South Dakota

Ross D. Davies
State Conservationist

Ralph E. Hansen
Extension Soil Conservationist

DAKOTA ZEPHYR--SPECIAL WEST RIVER EDITION

Land Leveling Makes Irrigation Possible
With Less Water, Time, and Labor

THIS ISSUE OF THE DAKOTA ZEPHYR CONTAINS STORIES, INFORMATION AND PROGRESS REPORTS FROM THE SOIL CONSERVATION DISTRICTS AND LU PROJECTS WEST OF THE MISSOURI RIVER. THE NEXT ISSUE WILL BE DEVOTED TO CONSERVATION ACTIVITIES IN EASTERN SOUTH DAKOTA.

A MESSAGE FROM DR. BENNETT, SOS CHIEF

"The job to be done is big--conservation must offset shortages of farm labor, equipment, power and production supplies if the needed production is to be attained. We must use the technical resources of the Service in this joint effort in achieving this objective--adequate harvests of all needed food, fibers and oils in 1943, produced with a minimum of soil wastage in order that equal or greater yields can be made in 1944 and for the duration."

Soil conservation will be taught this school year in all the rural schools in the Tri-County district. This is a joint project conducted by the supervisors, county superintendents, county agents, rural teachers, and soil conservation employees. Copies of the lesson plans and teaching units will be made available to all districts in the near future.

The Lawrence-Butte soil conservation district is now nearing the close of its second work season since the district program was started in May, 1941. One-hundred four farmers have made application to the district for assistance and 69 agreements have been entered into to assist them in establishing complete conservation programs.

To get their soils and farms in better condition for all-out war production, the district has assisted the farmers in leveling 560 acres of cropland, making it possible to irrigate more uniformly with less water, time, and labor.

Eight and one-half miles of irrigation canals have been constructed and repaired to adequately handle the water needed for crop production. Seventy-five hundred feet of drainage ditch has been constructed to drain 245 acres of land. Contour stripping has been put into practice on 510 acres of sloping fields. Four trench silos were constructed to increase the conservation of feed and build up reserve supplies. Eight drops have been installed in irrigation ditches to prevent excessive cutting. Seventeen dams for stock water have been completed. A program has been started to increase the amount of irrigated pasture on soil not adapted to intensive farming.

Working Together Keynote District Success

One of the cooperators on the Rosebud District was asked this question. "Do you believe the people in the District are getting the soil conservation work done faster than they would if there were no District?"

He replied, "No doubt about it. Lots of fellows thought about doing work like seeding idle land to grass, contouring, planting trees, and developing springs, but never got around to it. It's just like organizing a baseball team or anything else. When a bunch of fellows begin thinking together and working together on soil conservation, they really get things done."

* * *

Grass Seeding Makes Feed Available Years Earlier Than Natural Reseeding

More than 20,000 acres have been seeded to various types of grass since the inception of the program on the Wall Land Utilization Project. Approximately 4,000 additional acres will be seeded by next spring. Most of the seedings have been crested wheatgrass or a mixture which included crested. In the fall and winter of 1937-38, considerable strip seeding was done. Recently all fields have been seeded solid.

This project covers an area of 600,000 acres, 280,000 acres being government owned. In most instances, fairly good stands have been established as the result of the first seeding. Practically all of the best stands are on fields which had been abandoned for several years with the soil firm and a heavy cover of weeds or other growth.

Although most of the strip seeding was done five years ago, this was the first year that new seedlings appeared in the intervening areas. Most of the non-seeded strips are now filled in with a solid growth. On several previous occasions, a good crop of seed was produced but during 1942 the first natural reseeding became apparent.

Another interesting observation has been that crested wheatgrass appears to retard the growth of creeping jenny. Crested wheat has made a good growth in fields badly infested with "creepers". In some cases, the crested may eventually kill the "jenny", however, this may be too optimistic a view to take.

* * *

Hamill Supervisors Build Capability Maps And Make Treatment Recommendations

The Hamill Soil Conservation District was organized in the fall of 1941. The supervisors of this District feel that they are now making progress along very sound lines. A soil surveyor was acquired in September, who has, to-date, surveyed nearly one-third of this District. With the information made available through the soil surveyor, the Board of Supervisors have met, drawn up, and adopted a land use capability chart.

Through this chart the Supervisors have divided the lands in the District into four classes, namely, cultivated land that is suitable for continuous cultivation with simple erosion control practices, cultivated land that is suitable for cultivation with complex erosion control practices, and two classes of range land divided on the same principles. The Supervisors, at their last meeting, took copies of conservation surveys made on one of the supervisor's farms and spent the day building into their chart the various recommendations which they wish the Soil Conservation Service technicians to use in arriving at the treatments of different types of land to be incorporated into the cooperative agreement.

This seems to be one of the most sound and logical methods of procedure to be employed by any board of supervisors in starting the work on their soil conservation district. Technicians working on this District now know exactly what type of treatment and program the Supervisors expect to be employed on each farm placed under agreement. This method of procedure represents actual direction and control of the soil conservation districts by the Boards of Supervisors.

Crested Wheatgrass Changes Grazing Season

Seeding of 4,500 acres of abandoned cropland in 14,500-acre Community Pasture No. 5 on the Perkins-Corson LU Project near Lemmon to crested wheatgrass has caused a management problem which requires an adjustment. This ratio of nearly one acre of crested wheatgrass to two acres of native grass is very high.

Crested wheatgrass begins growth in the very early spring, and, therefore, is ready for grazing two to three weeks earlier than the native grasses. This grass also heads out early, about mid-June, making it unpalatable for the remainder.

If proper use is to be made of crested wheatgrass in Pasture 5 and elsewhere under similar conditions, the grazing season must be open before May 1 each year.

The native grasses will be deferred from grazing by the preference of livestock for crested wheatgrass early in the season. During the 1942 grazing season, for example, livestock grazed crested wheatgrass exclusively until June 15 to 20, after which they wouldn't touch crested until it "greened up" this fall.

Plans are being made to open the grazing season between April 1 and 15, depending upon general weather conditions and the wishes of the cooperators using this pasture.

* * *

The Custer County district supervisors are aiding the Folsom Baptist Church in establishing a windbreak for their buildings and grounds. An agreement was drawn up between the supervisors and the church in which the district provides technical assistance in designing and supervising construction of contour terraces and furnishes half the planting stock. The church members prepared the planting site, constructed the terraces, and planted the trees. In a few years it is hoped that the young trees will attain enough growth to provide shelter for the church which serves as a community meeting place and recreation center.

Supervisors Have Attacked Difficult Problem and Are Getting The Job Done

The Clearfield-Keyapaha Soil Conservation District is located in what has been an over-populated, over-capitalized area where the economic problems have been severe due to the original conditions under which this territory was settled by the homesteaders and aggravated by drouth and the grasshopper infestations.

Realizing the background of this district many people have wondered whether the district supervisors and the technicians could or were making any progress toward soil conservation. This board of supervisors and technicians on this district should be awarded some kind of merit for the progress which has been made. The biggest land use problem in this area is getting the land into the crop to which it is best adapted. The crop best adapted to a large part of this area is grass. Since the inception of this district, nearly 10,000 acres of grass have been seeded. This year alone the supervisors of the Clearfield-Keyapaha district harvested and distributed to their cooperators some 12,000 pounds of grass seed. Coupled with this, such cooperators as Carl Keszler, Carl Diez, F. C. Huddle, Noel Dodson, John Welsh, Franklyn May, and others harvested and sold seed to their neighbors in the district, and many district cooperators purchased seed from other commercial sources. Approximately 2,000 acres of grass will have been seeded in this district since September 1 of 1942. Without question supervisors and technicians of this district are getting the job done.

* * *

Four hundred tons of western wheatgrass hay are now stacked on 160 acres of meadow owned by Leach Bryant in the Elk Creek district. The district assisted Mr. Bryant design and construct dykes and ditches to spread runoff water on this quarter section of hayland. The 2½ tons per acre yield has convinced Bryant that the increase in hay yield will pay for the cost of building the ditches and dykes in the first year.

Gregory Farmers Waging Erosion War

If farmers in the Gregory County territory were not conscious of the erosion going on in the area, the extremely heavy rainfall of last spring rather emphatically brought it to their attention. Gullying, sheet washing, and reservoir silting caused by these heavy rains have magnified the necessity for adopting the conservation way of farming.

It is gratifying to know that something is being done about it, at least corrective measures have been started. During the spring of '42, about 1,500 acres of row crop were planted on the contour on 29 farms in the district and plans call for additional acreage of 1,400 acres on these same farms for 1943.

The district furnished technical assistance in staking 17 dams, 3 gully control diversions, planning 6 tree plantings, and 126 acres of grass seedings. Plans are underway for extending the use of subsurface tillage. Although the range land is generally in a thriving condition farmers are interested in locating dams to promote uniform grazing and conservation of the grasslands.

The program of the Gregory County soil conservation district has been carried on almost purely on a technical assistance basis. When farmers are sold on the idea of doing a job and are given the needed technical assistance to lay it out, their American ingenuity will find a way to get that job done. As the fall season gets under way, new applications are coming in, calling for assistance in helping to establish a wide variety of soil conserving measures.

Good Range Practices are Stressed to Produce More Food For Freedom

The Fall River County district has made good progress in planning and establishing soil and moisture conservation practices since October 1941 when technical assistance was first obtained. In this 12-month period, the district supervisors have aided in developing 57 farm conservation plans on 24,700 acres. A large part of this acreage consists of grazing land on which the operators are improving grazing management by proper stocking, development of stock water, water spreading, and other good range practices.

Contour tillage including contour strip cropping is one of the popular practices and rapidly gaining in favor. Two thousand acres of contour tillage have been planned with almost 1,000 acres established this first year. Those portions of the cultivated land least adapted to cultivation are being seeded to permanent grass to furnish hay and pasture. A large proportion of the 1,000 acres of such seeding is being put in the ground this fall.

The Fall River County district supervisors recognized the fire hazard existing in their district as being of major importance this year. To assist in controlling fires, they have joined forces with the neighboring Pioneer Grazing District and local fire wardens. These combined forces, through meetings, publicity in local papers, and through educational exhibits, have aroused the public to the need for fire control. Through equipment furnished by the Soil Conservation Service and operated by their members, they are prepared to combat fires that may break out in their localities.

* * * * *

Contour Farming Increases Yields Now

Contour cultivation has given excellent results, according to John Hlavka of Plainview, cooperator in the Tra-County district. Mr. Hlavka established contour cultivation on all his cropland in the spring of 1942, and this fall harvested 24 bushels of wheat per acre. In John's own words, "Contouring held more water on the fields. I wouldn't go back to straight cultivation. A year ago my listed corn washed out so I replanted with a surface planter. This year not twenty stalks of corn or cane washed out. My fields are very irregular in slope, but contouring gives me longer rows."

Water Spreading Results in High Yields

The Elk Creek soil conservation district, established April 15, 1941, embraces 195,000 acres in a predominantly range area including enough cultivated land to produce supplemental feed for livestock.

The majority of the ranchers in the area have learned to use their range conservatively, and the principal assistance the district offers in range management is the preparation of individual grazing plans, emphasizing deferred and rotation grazing where possible; explanation of proper salting practices; assistance to cooperators in the development of livestock water and in the engineering and construction of water spreading systems both on range and hay land; the seeding of perennial grass on formerly cultivated land for hay and range,

Thus far the district has aided in preparing range management plans on 20540 A. of grazing land, constructing 24 stock water ponds, seeding 571 acres to grass, and establishing 1616 acres of water spreading. Contour tillage is being practiced on 617 A.; wind strip farming on 304 A.

* * *

Water Spreading Major Practice in Custer District--Means More Grass--More Beef

The Custer County district supervisors, through cooperative agreements, are giving aid in soil and moisture conservation on 87 farm plans covering 77,300 acres.

Water spreading, to increase hay and pasture yields, is the major conservation practice in the Custer County district. One thousand acres of water spreading has been established out of the 4,000 acres planned. Diversion dams, dikes, and spreader ditches are being constructed this fall on much of the remaining 3000 acres.

Under existing farm plans, 2,700 acres of cultivated land are to be seeded to permanent grass. Over thirteen hundred acres have now been seeded.

District and AAA Build Many Dams

The farmers who cooperate with the American Creek Soil Conservation District were fortunate this past year in getting their stock-water dams built through the assistance rendered by the district.

Fifty-four dams have been built or repaired to date, and within the next few days the job will be completed with a total of sixty-four dams built.

The district secured a contractor who has used two units of equipment in the district since the middle of July.

The district first determined who wanted dams built. This was largely done by letter. Then the district engineers visited each farmer who wanted a dam to help locate the site, stake the dam, and determine the yardage. After the yardage had been determined, the cooperator called on the treasurer of the district had made the necessary AAA assignments or deposited cash to make full payment for the yardage. The contractor then constructed the dam according to the stakes and specifications established by the engineers. Within a day or two after the dam was complete the engineer checked the work, and if the dam was up to standard in every respect, a letter of approval was sent to the district secretary who forwarded a check to the contractor covering 80% of the cost of the dam. The remaining 20% of the cost of the dam being held in the district treasury until all work for the district cooperators is completed. As soon as the district work is completed, the contractor will receive the remaining 20% of his payment.

The letter sent by the district engineer to the district secretary includes the yardage of the dam, and also the cost. A copy of this letter is forwarded to the AAA office in Kennebec and serves as certification to the AAA office and provides proof that the farmer has performed that particular soil building practice on his farm and therefore permits the AAA to make payment thereon.

Contouring Produces Best Sorghum Crop

Ernest Clemertz, Rosebud district cooperator, worked out a system of contour strip cropping this spring with a little assistance from the district in laying out guide lines and a map showing suggested strips. He went to a lot of work putting the strips into cultivated crops and the irregular areas into permanent grass. He says the crop of sorghum raised on this field is the best he ever had, and the corn is much better than it would have been if it had not been planted on the level.

* * *

Rosebud District Completes a Year's Work

At the end of the first year of activity on the Rosebud district, it is interesting to look back and see what has been done. The first and most important item is the neighborly spirit of cooperation.

A year ago the supervisors held a meeting to find out how many of the people were interested in doing grass seeding work. Half of the men in the district attended the meeting or sent word that they were interested. By December about 1,000 acres of grass seeding had been accomplished with the district's drill and 400 acres had been sown by those who used other drills.

This spring a similar meeting was held to start work on tree plantings. The co-operators planned their own schedule of plantings and arranged for help. As a result, there was no waiting for sites to be prepared. Fifty thousand trees were planted in 8 days on 18 different farms.

During the spring and summer contouring work was planned on 10 different fields, but when rainy weather held up the farm work until June it was impossible to carry out more than 3 of these fields. One contour strip cropped field on the Clemertz farm was very successful.

This summer development work was done on two springs. One has a small flow that is piped to tanks for livestock. Another larger spring may have possibilities for

other uses and development has not been completed.

This fall, grass will be sown on another 1,200 acres of idle cropland unless the snow is too deep before Thanksgiving Day.

* * *

Abundance of Feed and Water in Land Purchase Area Stabilizes Stock Raising

Range conditions have improved considerably during the past two years on the Badlands-Fall River LU Project in the Fall River area. Favorable moisture and growing conditions have produced an abundance of feed and water.

During the 1942 grazing season, grazing permits were issued on government-owned land to 122 individual operators and to two grazing associations. These permits included 6,878 head of cattle and 5,760 head of sheep. Nineteen special use permits were issued, of which 17 were for cutting hay, and two for harvesting crested wheatgrass seed.

Range development work for the season consisted mainly of dam construction and seeding of grass. Five dams were built and approximately 800 acres of crested wheatgrass have been seeded this year.

In developing a fire control program, approximately 100 miles of fire guards were constructed in the large community pastures. The Pioneer Cooperative Grazing District recently expanded in membership from 8 to 68 members. A similar organization is in the process of being organized in the Custer County portion of the project.

* * *

The following word received from Fred Linn, Dupree, cooperator with the Tri-County District has this to say about part of his hay crop put up in 1942:

"I have just finished stacking a field of crested wheatgrass which is two years old. I have six stacks, about 8 tons a stack. It is a 25-acre field. Haven't ever raised so much hay on such a small piece of land."

Conservation Measures Prove Successful; Water Developments Stressed in Jackson Additional Areas Petition District

Organization of the Pennington soil conservation district was completed in September, 1940, just a little more than two years ago. During the two years, soil and moisture conservation practices have been established and effectively used on over 23,000 acres. In June, 1942, 53,000 A. were added to the district. The additional area was included by petition of land owners who are interested in farming by methods which conserve the soil and insure better production. Owners of another 50,000 A. tract are petitioning the supervisors for inclusion within the district.

Highlights of district activities to date are establishment of 1700 A. contour cultivation, 416 A. grass plantings, 538 A. strip cropping, 8,700 A. adapted rotations, 1168 A. subsurface tillage, 15 A. farm shelterbelts, 71 earth dams, 214 A. flood irrigation, 5 irrigated gardens, 23,700 A. properly managed grazing land. Combined treatment was applied on 30,000 A. of land covered by 107 cooperative agreements. Range resource and conservation soil surveys have been made on the 85,000 acres in the original district.

The supervisors have held 21 meetings and have carried on an educational program since the district was organized.

Jackson Supervisors Harvest Grass Seed

This fall the supervisors of the Jackson County soil conservation district obtained a permit from the Land Utilization Project at Wall, S. D., to harvest crested wheatgrass on a share basis. This enabled them to furnish good seed to their cooperators and other operators at a low cost. Approximately 10,000 pounds of seed were harvested, the supervisors' share being 5,000 pounds. This seed was disposed of at 10¢ per pound, and after all expenses had been paid there remained a fund to use for repairing equipment and purchasing needed articles.

The Jackson County soil conservation district will soon be one year old. In that time it has developed from the planning stage into an action program. Early planning included an institutional adjustment survey of schools, roads, county debt, and needed county adjustments, and a project planning survey which has approached the problems from the standpoint of resources in land, climate, and people. This should aid in readjusting operations so that under average conditions the average operator can obtain a fair standard of living.

Many practices have been established on the 27,663 acres controlled by farmers and ranchers working with the district. These practices include both economic and range management developments, i.e., pump irrigation, 188 A.; flood irrigation 267 A.; water spreading, 419 A.; subsurface tillage, 1255 A.; contour cultivation, 403 A.; reseeding, 816 A.; stock water developments, 15 dams. The supervisors feel the work has progressed very well and has made a distinct contribution to agriculture in Jackson County.

Grass Harvested at Lemmon Purchase Area

The Grass Nurseries Division of the Soil Conservation Service harvested for seed approximately 4000 acres of crested wheat grass, 300 acres of western blue grass, 80 acres of feather bunch grass and 900 acres of western wheatgrass during the 1942 growing season.

Approximately 225,000 pounds of crested wheatgrass seed has been threshed, cleaned, sacked, and distributed to ten IJ projects, 60 conservation districts and four conservation camps at a cost of from 4¢ to 5¢ per pound. Approximately 90,000 pounds of crested wheatgrass seed remain to be threshed. Other seeds threshed or to be threshed are: Western, blue grass, 7650 pounds; feather bunch grass, 2200 pounds; western wheatgrass, 30,000 pounds.

UNITED STATES
DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Ross D. Davies, State Conservationist
Huron, South Dakota

Official Business

Penalty for Private use to avoid
payment of postage, \$300

Public Stock Watering Place Provided

A half section of land, including the 50 acre Edson Dam, 3 miles west of Faith, has been purchased by the City of Faith from the Rural Credit Board and leased to Meade County as a public stock watering place for trail herds moving toward their shipping point at Faith. A three-way cooperative agreement was prepared between the City of Faith, Meade County, and the Tri-County soil conservation district to make extensive repairs to the 30,000-yard dam.

The district equipment and technical assistance was used in making necessary repairs on the dam. The eroded sides were rebuilt to 3 to 1 slope on the upper face and 2 to 1 on the lower face, ending with a 16-foot top, requiring 9000 yards of dirt. A new flood spillway was provided and a 12-inch trickle tube 2 feet below the flood spillway was installed. The Edson Dam provides an excellent permanent watering place for trail herds and the cooperative effort of the parties involved made it possible.

Subtillage Contributes to War Effort

G. A. Roesner, Gregory County district farmer in the Lucas vicinity had an idea a couple of years ago that maybe subsurface tillage had some merit. He had the idea strong enough that he bought a subsurface tillage machine to try out his idea. He used the machine in stubble the first year and it appeared to him to be giving good results. In the fall of 1941 he subtilled all of his stubble land and in the spring of 1942 planted all of his cropland to small grain.

After watching the heavy rains soak into this subtilled land with a minimum of erosion, Roesner was very well pleased with the practice. When he and his neighbors threshed the crop on this land they were highly enthusiastic about this method of tilling soil. The residues retained on the top of the ground had reduced erosion and left the soil in a mellow condition. Mr. Roesner is now planning to subsurface till all of the stubble and plant part of the fields to corn by the subsurface system.